

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A charged particle beam apparatus comprising a charged particle source and a charged particle optical system for focusing a beam of charged particles emitted by said charged particle source and scanning a sample with the focused beam, said apparatus further comprising:

at least first and second deflectors for controlling the incident position of the charged particle beam on at least two focusing lenses including an objective lens,

wherein the incident position of the charged particle beam on said objective lens is controlled by said first deflector in order to irradiate said sample with said charged particle beam from a direction that is inclined with respect to the optical axis of said objective lens, and

wherein the incident position of the charged particle beam on at least one of said focusing lenses other than said objective lens is controlled by said second deflector such that an off-axis chromatic aberration is produced that cancels an off-axis chromatic aberration produced by the objective lens when the incident position of said charged particle beam on said objective lens is controlled.

2. (Previously presented) A charged particle beam apparatus comprising a charged particle source and a charged particle optical system for focusing a beam of charged particles emitted by said charged particle source and scanning a sample with the focused beam, said apparatus further comprising:

at least first and second deflectors for controlling the incident position of the charged particle beam on at least two focusing lenses including an objective lens,

wherein the incident position of the charged particle beam on said objective lens is controlled by said first deflector in order to irradiate said sample with said charged particle beam from a direction that is inclined with respect to the optical axis of said objective lens, and

wherein the incident position of the charged particle beam on at least one of said focusing lenses other than said objective lens is controlled by said second deflector such that a coma aberration is produced that cancels a coma aberration produced by the objective lens when the incident position of said charged particle beam on said objective lens is controlled.

3. (Previously presented) A charged particle beam apparatus comprising a charged particle source and a charged particle optical system for focusing a beam of charged particles emitted by said charged particle source and scanning a sample with the focused beam, said apparatus further comprising:

at least first and second deflectors for controlling the incident position of the charged particle beam on at least two focusing lenses including an objective lens; and

a lens control device for controlling said focusing lenses independently, and

wherein the focusing lenses are controlled by the lens control device; and

the incident position of the charged particle beam on said objective lens is controlled by said first deflector in order to irradiate said sample with said charged particle beam from a direction that is inclined with respect to the optical axis of said objective lens, and

the incident position of the charged particle beam on at least one of said focusing lenses other than said objective lens is controlled by said second deflector such that an off-axis chromatic aberration and a coma aberration are produced that cancel an off-axis chromatic aberration and a coma aberration produced by the objective lens when the incident position of said charged particle beam on said objective lens is controlled.

4. (Original) The charged particle beam apparatus according to claim 1, wherein the charged particle beam is shone on the sample under observation at an angle with respect to the optical axis.

5. (Previously presented) The charged particle beam apparatus according to claim 4, further comprising an astigmatism correction device which is controlled in accordance with the inclination angle of the charged particle beam.

6. (Original) The charged particle beam apparatus according to claim 4, wherein the focal length of the objective lens is controlled in accordance with the inclination angle of the charged particle beam.

7. (Original) The charged particle beam apparatus according to claim 4, wherein an irradiated position error of the charged particle beam on the sample is corrected in accordance with the inclination angle of the charged particle beam.

8. (Currently amended) The charged particle beam apparatus according to claim 1, wherein the at least one of the focusing lenses other than the objective lens include a first lens and a second lens, the first lens having magnetic poles with a relatively large opening diameter and gap and the second lens having magnetic poles with a relatively small opening diameter and gap, and wherein the first lens is excited when the charged particle beam is shone on the sample under observation parallel to the optical axis while turning off the ~~first~~ second lens, and the second lens is excited when the charged particle beam is shone on the sample at an angle with respect to the optical axis while turning off the first lens.

9. (Previously presented) The charged particle beam apparatus according to claim 1, further comprising an aperture and a transport mechanism for moving the aperture in a plane perpendicular to the optical axis.

10. (Previously presented) A charged particle beam apparatus according to claim 1, wherein a deflector is disposed between the charged particle beam source and said focusing lenses.

11. (Original) The charged particle beam apparatus according to claim 10, wherein the charged particle beam is shone on the sample under observation at an angle with respect to the optical axis.

12. (Original) A charged particle beam apparatus comprising a charged particle source and a charged particle optical system for focusing a beam of charged particles emitted by said charged particle source and scanning a sample with the focused beam, said apparatus further comprising:

an aperture mechanism transportable in a direction perpendicular to the optical axis, said aperture mechanism disposed between the charged particle beam source and at least two stages of focusing lenses including an objective lens, wherein the aperture mechanism limits the passage of the charged particle beam such that the aberration produced by the objective lens and that produced by the other lenses cancel each other out.

13. (Original) The charged particle beam apparatus according to claim 12, wherein the charged particle beam is shone on the sample under observation at an angle with respect to the optical axis.

14. (Previously presented) A method of irradiating a sample with a charged particle beam at an angle with respect to the optical axis, using a charged particle beam apparatus comprising a charged particle beam source and at least two stages of focusing lenses including an objective lens for focusing a beam of charged particles emitted by the charged particle beam source and scanning the sample with the charged particle beam, wherein the charged particle beam is incident on one of the at least two stages of focusing lenses which is closer to the charged particle beam source from a direction such that an aberration is produced that offsets the aberration produced by the inclination of the charged particle beam.